

Remarks

Applicants thank the Examiner for the continued attention to the current application. Claims 1 - 39 were examined. Claims 1 - 39 are currently pending. Applicants have amended independent claims 1, 15 and 27 to further clarify the scope of protection sought. Applicants have further amended dependent claims 2, 5, 7, 10, 16, 19, 21, 24, 27 - 29, 32 and 34 - 37 for consistency with the amended independent claims. The amendments are supported by the specification as originally filed, and at least at page 7, lines 8 - 10.

Claim Rejections - 35 USC § 103

The Examiner has rejected claims 1 - 6, 8, 10, 12 - 20, 22, 24, 26 - 34 and 36 - 39 under 35 U.S.C. 103(a) as allegedly being unpatentable over Rosenberg (WO 99/49443, hereinafter Rosenberg) in view of Keyson et al. (US 5,784,052). Applicant respectfully requests reconsideration of the rejection in view of the amended claims and at least the reasons set forth below.

Applicants have amended independent claim 1 to clarify that not only is the feedback provided in response to rotational motion of the scrollwheel, but the provided feedback is selected in dependence on triggers or messages from application software on the handheld electronic device. Applicants note that the application software triggers may include, for example, moving the cursor along from icon to icon, in which case a trigger may be used to select a feedback mode indicating to the user that the cursor has switched positions to the next icon. The application software triggers may further include moving the cursor through an image in a page, in which case a feedback mode may be selected to indicate to the user that the image contains no link. Various additional uses of triggers for selecting feedback modes are described throughout the application.

Applicants submit that the amended claim clarifies that both types of feedback, that is rotational and lateral feedback modes, are selected in response to the application software triggers resulting from rotation of the scrollwheel. Applicants respectfully submit that the combined teachings of Rosenberg and Keyson do not provide all of the features of the amended claim, and as such, the claim is not obvious in view of their combination.

Applicants first note that the amended claim requires the handheld electronic device to have application software on it. Applicants respectfully submit that both Rosenberg and

Keyson fail to disclose, teach, or suggest the handheld electronic device as recited by the amended claims.

Rosenberg describes various embodiments of the control wheels and knobs; however, none of them relate to a handheld electronic device with application software on it. For example, Figs 1 - 3B depict various embodiments of mice or game controllers that include a scrollwheel; however all of the embodiments require the handheld device to be connected to a host computer. Rosenberg depicts additional embodiments of devices using control knobs, for example in Figs 10 and 11; however, the devices are described as a control panel on a stereo system and cannot be considered a handheld electronic device with application software on it as recited by the claims.

Furthermore, the control knobs described in Rosenberg cannot be considered the same as the scrollwheel of the current claim. The rotational movement of the control knob is the result of a rotational force applied coaxially to the axis of rotation of the control knob, while the rotational movement of the scrollwheel is the result of a force that is applied normal to the axis of rotation of the scrollwheel and on one side of the scrollwheel. Similarly, Keyson describes a trackball that enables entering 3D coordinates and not a scrollwheel of a handheld electronic device with application software on it.

Applicants respectfully submit that the combined teachings of Rosenberg and Keyson fail to teach or suggest all of the limitations recited by the amended claims as set forth above. Having regard to the combined teachings of Rosenberg and Keyson, one skilled in the art would not be led to apply the combined teachings to a handheld electronic device. As such, Applicants respectfully submit that the amended independent claim is patentable over the combination of Rosenberg and Keyson for the reasons set forth above.

Although it is believed that the reasons set forth above are sufficient to overcome the rejection of the independent claim based on Rosenberg and Keyson, Applicants further note that the combined teachings also fail to teach or suggest providing both rotational and lateral feedback in response to rotational motion of the scrollwheel and selecting the feedback mode in dependence on triggers received from application software on the handheld electronic device, as recited by the amended claim.

The Examiner has alleged that it would be obvious to apply the alleged lateral motion of Keyson to the jolt or pop motion of Rosenberg. However, Applicants note that the jolt motion of Rosenberg is a rotational feedback similar to detent; however, jolts do not

attract or repel the wheel from a particular rotational position (Rosenberg page 27, lines 3 - 6). As such, one skilled in the art would not be led to modify the rotational jolt feedback of Rosenberg to use the alleged lateral motion of Keyson. Applying the teachings of Keyson to those of Rosenberg, one skilled in the art could possibly be led to provide the alleged lateral motion of Keyson in addition to the rotational feedback of Rosenberg.

Applicants respectfully submit that even assuming that one skilled in the art would modify the trackball of Keyson to be a scrollwheel according to Rosenberg, the alleged lateral motion of Keyson does not provide the lateral feedback to a user through a scrollwheel, in response to rotational motion of the scrollwheel and in dependence on triggers or messages from application software on the handheld electronic device.

As described in Keyson the lateral, or vertical according to Keyson, force is dependent on the vertical position of member 108 and/or on the force measured by sensor 122. Keyson also teaches that a PC may control the vertical drive means (col. 7, lines 28 - 34). However, this does not suggest selecting the lateral feedback mode in dependence on triggers received from application software on the handheld electronic device. As taught by Keyson the PC controls the vertical drive means based on the difference between a measured position and measured speed and the intended position and speed. (col. 7, lines 34 - 36)

Applicants note that with reference to Fig. 7, Keyson describes that the software windows application generates data to provide tactile feedback to the user via the input device. Applicants submit that this does not teach the triggers as recited in the amended claim. In addition to the software windows application running on a host computer and not on the handheld electronic device, it is noted that the vertical motion of Keyson is used to provide a resistance to vertical motion, which allows various thresholds or ranges to be established. The vertical force thresholds or ranges can then be used by software managing the software windows to select (or open close etc) one of the overlapping software windows. As described by Keyson, when a user depresses the rotatable member 108 of the input device 104 against a resistance or lets loose after having depressed the member, the next lower or higher box is indicated to confirm the transition to the next lower or higher level (col. 8, lines 61 - 64) The use of the vertical motion to provide a resistive force to select one of a plurality of overlapping windows does not teach or suggest providing lateral feedback to a user through a scrollwheel in

response to rotation of the scrollwheel and in dependence on triggers received from application software on the handheld electronic device.

As set forth above, the combined teachings of Rosenberg and Keyson fail to teach or suggest all of the limitations of amended independent claim 1. As such Applicants respectfully submit that amended claim 1 is not obvious in view of the combined teachings of Rosenberg and Keyson and so complies with 35 U.S.C. 103(a).

Regarding independent claims 15 and 27, Applicants have made similar clarifying amendments as set forth above with respect to independent claim 1. Applicants respectfully submit that the independent claims 15 and 27 have a similar scope as claim 1, and as such Applicants respectfully request reconsideration of the rejection of the claim for at least similar reasons as those set forth above with regard to claim 1.

The Examiner has rejected dependent claims 2 - 6, 8, 10, 12 - 14, 16 - 20, 22, 24, 26, 28 - 34 and 36 - 39 under 35 U.S.C. 103(a) as allegedly being unpatentable over Rosenberg (WO 99/49443, hereinafter Rosenberg) in view of Keyson et al. (US 5,784,052). Applicant respectfully submit that, at least by their dependence on the amended independent claims, claims 2 - 6, 8, 10, 12 - 14, 16 - 20, 22, 24, 26, 28 - 34 and 36 - 39 comply with 35 U.S.C. 103(a).

The Examiner has rejected dependent claims 7, 9, 11, 13, 14, 21, 23, 25, 35 under 35 U.S.C. 103(a) as allegedly being unpatentable over Rosenberg (WO 99/49443, hereinafter Rosenberg) in view of Keyson et al. (US 5,784,052) when combined with one of Martin et al. (US 6,563,487), Goren et al. (7,190,351) and Shahoian et al. (US 6,693,622). Applicants respectfully submit that none of the cited references provide any teachings or suggestions that would enable one skilled in the art to overcome the deficiencies of the combined teachings of Rosenberg and Keyson as set forth above. Applicant respectfully submit that, at least by their dependence on the amended independent claims, claims 7, 9, 11, 13, 14, 21, 23, 25, 35 comply with 35 U.S.C. 103(a).

Closing

In view of the amendments, remarks and having dealt with all of the rejections raised by the Examiner, reconsideration and allowance of the current application is courteously requested.

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